



Berries Genetic Resources in Estonia

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Fruit and berry genetic resources collections at the Estonian University of Life Sciences

- Collections date back to the beginning of breeding work at the Institute of Horticulture and Apiculture established in Polli in 1945
- The collections are part of the Estonian plant genetic resources network initiated in 1994.
- *Ex situ* field collections, including local and introduced genotypes
- Material available on request for research and education



National Programme: “Collection and Conservation of Plant Genetic Resources for Food and Agriculture 2014-2020”

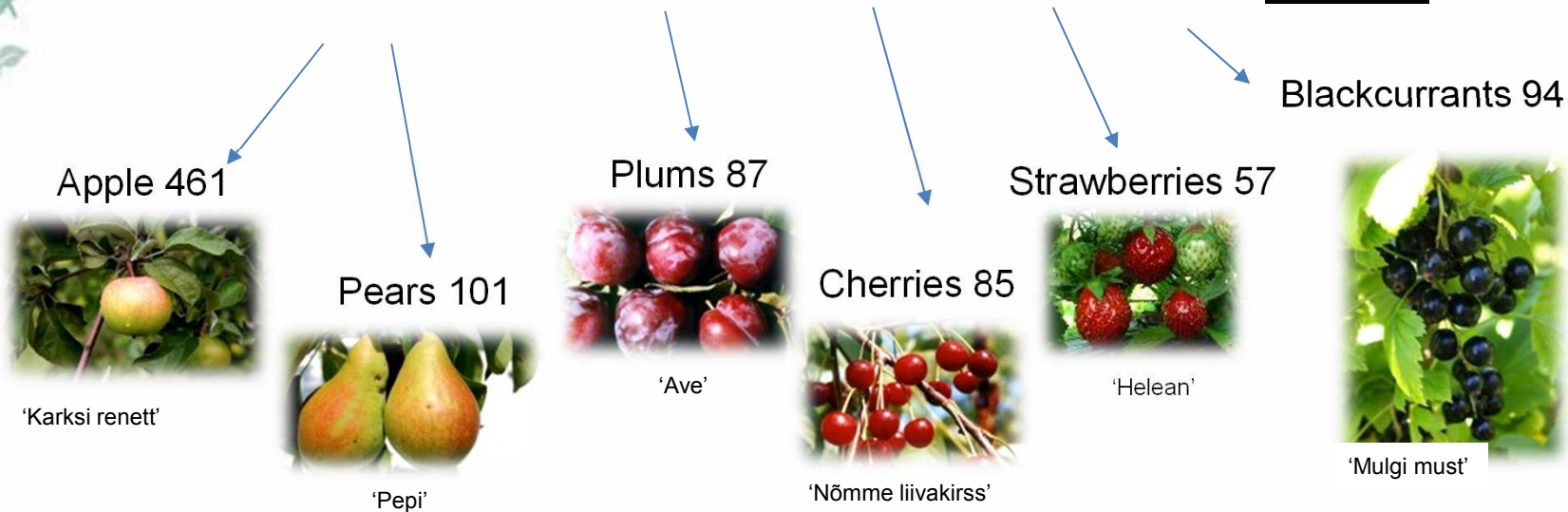
Objectives of the programme:

- **Collection, conservation** and sustainable use of plant genetic resources of Estonian origin
- **Description, evaluation and documentation** of collected material
- Development of the national plant genetic resources network
- Rising public awareness of the importance of agricultural genetic resources
- Participation in international cooperation



Genetic resources and breeding collection (National Programme)

Whole number of accessions c.a **1200**



In addition: Red and white currant, gooseberry, raspberry, edible honeysuckle, blackberry, rowanberry

Berries

number of accessions 369

Edible honeysuckle 47



'Roksana'

Strawberries 57



'Helean'

Cranberries 5



Raspberries 55



'Helkal'

Gooseberries 41



'Rae 1'

Red and white currants 26



'Kurvitsa 4'

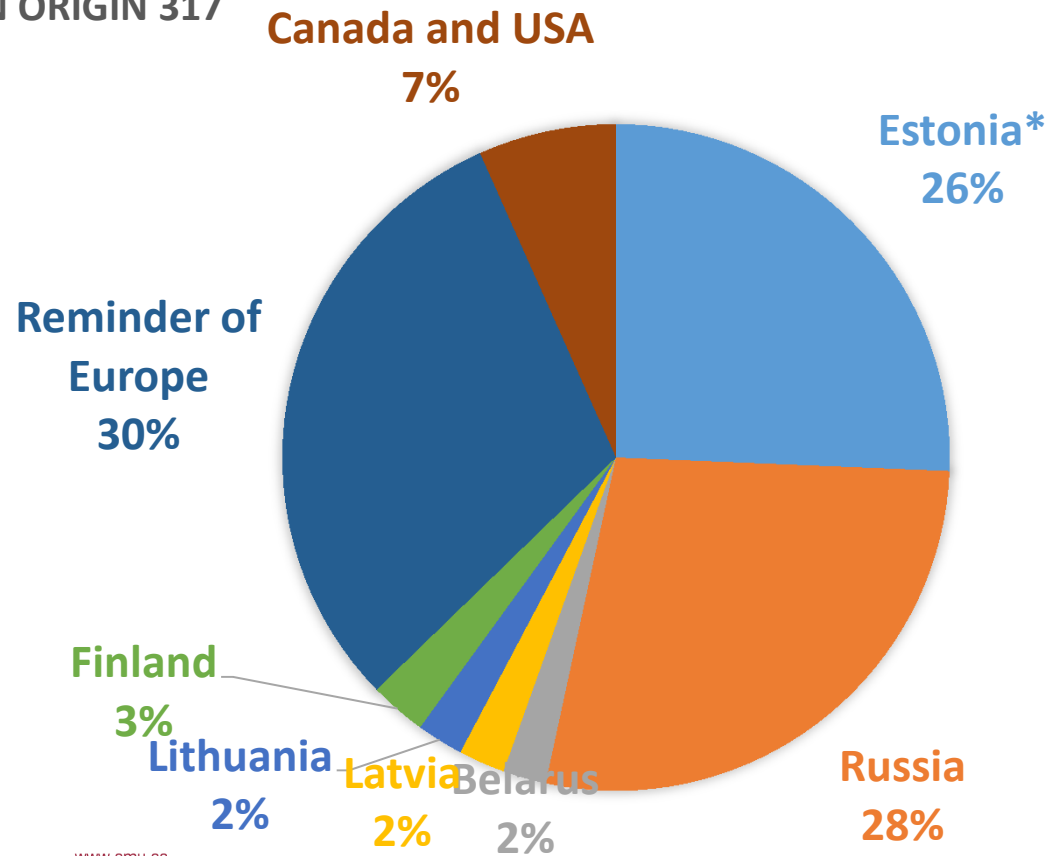
Blackcurrants 94



'Mulgi must'

Country of origin

TOTAL NUMBER OF ACESSIONS 1191;
ESTONIAN ORIGIN 317



Web portal and databases

FRUIT GENETIC RESOURCES OF ESTONIAN UNIVERSITY OF LIFE SCIENCES

HOME POME FRUITS STONE FRUITS SMALL FRUITS RECOMMENDED CULTIVARS

Search for cultivar or breeding parent

Black currant - Karri

'Karri'. Bred by Asta-Virve Libek. The cross made in 1990: 'Mulgi Must' x 'Kantata'. Registered as new cultivar and PBR protected since 2.01.2008

Fruit: midseason, black, big, berries in tall clusters with thick density, good berry separation from clusters, good quality for dessert and processing.

Bush: rather high, upright, producing shoots moderately. Winter hardy, good yielding, resistant to mildew and black currant gall mite.

- Black currant (*Ribes nigrum* L.)
- Estonian cultivar
- Perspective cultivar (P)
- Accession present in Polli Horticultural Research Ce
- Year of planting:2008
- Accession no: EST2234
- Accession data in SESTO

Description and photos

Passport data (317 accessions of Estonian origin) with link to EURISCO

The Estonian National Inventory

SESTO Trait (C&E) References Utilities User Manual Links

Genus Taxons Cultivars Accessions [Search]

Taxon

| Scientific Name | Authority | Family | English name | IT_PGR Annex 1 |
|-----------------|-----------|----------|--------------|----------------|
| Rubus idaeus | L. | Rosaceae | Raspberry | FALSE |

Accessions

| GBK | Accession | Accession name | Origin | SampStat | Mandate |
|-------|-----------|----------------|--------|----------|--------------|
| Polli | EST2211 | Aita | EST | 500 | ACC [select] |
| Polli | EST2212 | Alvi | EST | 500 | ACC [select] |
| Polli | EST2199 | Espe | EST | 500 | ACC [select] |
| Polli | EST2200 | Helkal | EST | 500 | ACC [select] |
| Polli | EST2201 | Siveli | EST | 500 | ACC [select] |
| Polli | EST2202 | Tomo | EST | 500 | ACC [select] |

Total hits 6 (viewing 1-6) View list as excel report (as above)

Accession number:



Characterization and evaluation

- Phenological evaluation data from 1945-2003 (only partly digitalised)
- 2003-2019 records in Excel spreadsheets
- Morphological data (*Ribes*) collected within RIBESCO project, available via crop specific database (not updated after the project)
- Biochemical analysis along with phenological data
- Screening of bioactive compounds in berries



Ongoing research projects

- Blackcurrant, gooseberry, raspberry and blueberry breeding
- Development of cultivation, harvesting and processing technologies for new fruit and berry cultures
- FREEZE DRYING. Development of the pre-treatment technologies of freeze-drying and valorisation of the press residues
- PlantValor – enhancing the scientific research and cooperation on valorization of plant origin raw materials, and increasing sectorial innovation capacity



Institute of Agricultural and Environmental Sciences Polli Horticultural Research Centre

<http://polli.emu.ee/en/>



From breeding to processing



Thank you!

